

012398026    \*\*Image available\*\*  
WPI Acc No: 1999-204133/199917  
XRPX Acc No: N99-150336

**Actuator controller e.g. for brushless motor**

Patent Assignee: MITSUBISHI DENKI KK (MITQ ); MITSUBISHI ELECTRIC CORP  
(MITQ )

Inventor: WATANABE S

Number of Countries: 004    Number of Patents: 005

**Patent Family:**

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5880565	A	19990309	US 9824199	A	19980217	199917 B
DE 19811844	A1	19990602	DE 1011844	A	19980318	199928
JP 11148378	A	19990602	JP 97313696	A	19971114	199932
KR 99044791	A	19990625	KR 9832297	A	19980808	200036
KR 286567	B	20010502	KR 9832297	A	19980808	200220

Priority Applications (No Type Date): JP 97313696 A 19971114

**Patent Details:**

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5880565	A		11	H02J-005/00	
DE 19811844	A1			G05B-013/02	
JP 11148378	A		9	F02D-011/10	
KR 99044791	A			F02D-045/00	
KR 286567	B			F02D-045/00	Previous Publ. patent KR 99044791

Abstract (Basic): US 5880565 A

NOVELTY - A predetermined initial value outside the range of learned values is written in memory, beforehand. If it is determined that battery is detached, then memory is determined to be in an unlearned state with reference to stored data value, when data value exhibits predetermined initial value.

DETAILED DESCRIPTION - A sensor (6) detects operation position of an actuator (1) relying upon voltage signal. An actuator control unit (17) controls actuator such that operation position becomes target position. An actuator drive unit (18) drives actuator based on control quantity from actuator control unit to which electric power is supplied from a battery (9). A determination unit (11) determines attached or detached state of battery. A memory (12) stores data regarding relationship between operation position and voltage signal as a learned value.

USE - For controlling brushless motor or throttle actuator automobile engine.

ADVANTAGE - Prevents determining defective state erroneously due its own diagnosing function.

DESCRIPTION OF DRAWING(S) - The figure shows block diagram of actuator controller.

Actuator (1)  
Sensor (6)  
Battery (9)  
Determination unit (11)  
Memory (12)  
Actuator control unit (17)  
Actuator drive unit (18)  
pp; 11 DwgNo 1/6

Title Terms: ACTUATE; CONTROL; BRUSH; MOTOR  
Derwent Class: Q52; T01; T06; U24; V06; X16; X22  
International Patent Class (Main): F02D-011/10; F02D-045/00; G05B-013/02;  
H02J-005/00  
International Patent Class (Additional): F02D-009/10; F02D-041/00;  
F02D-041/22; G05B-023/02; G05D-003/00; H02J-007/14; H02K-011/00;  
H02P-006/12  
File Segment: EPI; EngPI  
Manual Codes (EPI/S-X): T01-H01B3; T01-J08F; T01-J16C2; T06-A07A; U24-H;  
V06-N04; V06-N26; V06-U03; X16-H; X22-A03B1A